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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,293	02/06/2004	Hong-Sick Park	8071-112T	4918
7590 F. Chau & Associates, LLC 130 Woodbury Road Woodbury, NY 11797			EXAMINER PHAM, LONG	
			ART UNIT 2814	PAPER NUMBER
			MAIL DATE 06/18/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/772,293	Applicant(s) PARK ET AL.	
	Examiner Long Pham	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17 is/are allowed.
- 6) ☒ Claim(s) 1, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 2-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Rejections and/or objections as previously applied

Claims 1 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (AAPA) of this application.

With respect to claim 1, AAPA teaches a method of manufacturing a thin film transistor array panel, the method comprising (see pages 1 and 2 of this application):

- Forming a gate conductor on an insulating substrate;
- Forming a gate insulating layer;
- Forming a semiconducto member;
- Forming a data conductor; and
- Forming a pixel electrode connected to the data conductor.

AAPA appears to teach forming the gate conductor, the data conductor, and the pixel electrode are formed by etching using different etchants and conditions.

However, it would have been obvious to one of skilled in semiconductor art to form the gate conductor, the data conductor, and the pixel electrode by etching using single etchant or one etchant to reduce processing steps and processing material to thereby reduce production cost.

With respect to claim 26, AAPA further teaches the data conductor comprises of at least two layers. See para [0005] of this application.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (AAPA) of this application.

With respect to claim 1, AAPA teaches a method of manufacturing a thin film transistor array panel, the method comprising (see pages 1 and 2 of this application):

- Forming a gate conductor on an insulating substrate;
- Forming a gate insulating layer;

Forming a semiconductor member;
Forming a data conductor; and
Forming a pixel electrode connected to the data conductor.

AAPA appears to teach forming the gate conductor, the data conductor, and the pixel electrode are formed by etching using different etchants and conditions.

However, it would have been obvious to one of skilled in semiconductor art to form the gate conductor, the data conductor, and the pixel electrode by etching using single etchant or one etchant to reduce processing steps and processing material to thereby reduce production cost.

AAPA also fails to teach the etchant is a phosphoric acid, a nitric acid, or acetic acid.

However, the etching of metal by a phosphoric acid, a nitric acid, or acetic acid is well-known in semiconductor art.

Response to Arguments

Applicant's arguments filed 04/17/07 have been fully considered but they are not persuasive. See below.

In response to the applicant's arguments in the paragraphs on pages 7, 8, and 9 of the amendment dated 04/17/07, it is submitted that it would have been obvious to one of skilled in semiconductor art to form the gate conductor, the data conductor, and the pixel electrode by etching using single etchant or one etchant or simultaneously to reduce processing steps and processing material to thereby reduce production cost.

Allowable Subject Matter

Claims 2-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 15-17 are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 571-272-1714. The examiner can normally be reached on Mon-Frid, 10am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2814

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Long Pham

Primary Examiner

Art Unit 2814

LP